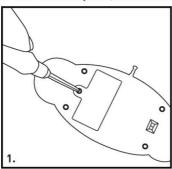
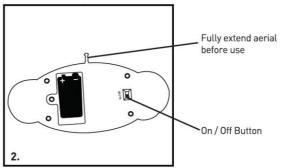
# Instructions

# Inserting the batteries Controller

- 1. Unscrew the battery cover using a cross headed screwdriver.
- Insert the battery (1x9v, not included) in accordance with the polarity shown. Replace the battery cover.

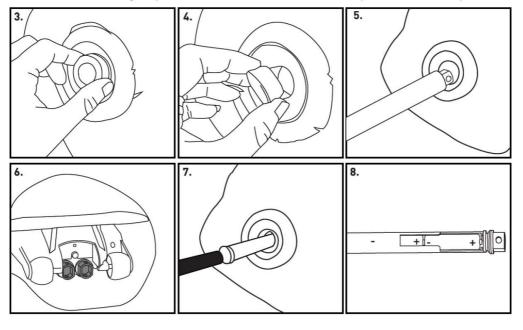




## Inserting the batteries

#### Spheroidz

- Unscrew the Battery Access Valve on the PVC ball.
- Pull-out the air tight cap to access the inner ball.
- Insert the Battery Tool in to the inner ball .
- Lock on to one of the Battery Tubes on the vehicle.
- Turn anti-clockwise to release the Battery Tube. Remove the whole Tube from the ball.
- Place the Batteries into the compartment in accordance with the polarity shown. 8.
- Connect the Battery Tool to the Battery Tube once more and insert into the vehicle. Turn clockwise to lock Battery Tube in to position in the vehicle.
- 10. Repeat for second Battery Tube.
- 11. Before inflating the ball, switch the ON/OFF switch to ON. Push the switch at the back of the vehicle in for ON and out again for OFF. A red LED goes on when the vehicle is switched ON. It cannot be turned on and off without deflating the balls once again.
- 12. Push back on the Air-Tight cap on the external PVC ball and screw the Battery Access Valve back in position.



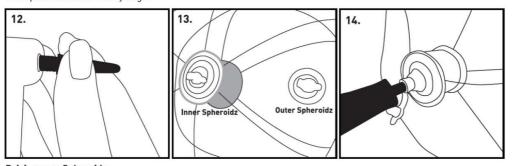
#### Inflating your Spheroidz

The Spheroidz has a double layer of PVC material, both inner and outer balls need to be inflated before the product can be used.

The product comes with an adapter that will fit most UK pumps. If it does not the ball can be inflated by blowing into the ball.

- 12. Fit the adapter onto your pump.
- 13. Firstly inflate the inner ball using the valve on the ball with the silver tube (connects the inner and outer chambers of the ball). Remove the valve top.
- 14. Insert the adapter and pump the ball up until rigid. Replace the valve top.
- 15. Then inflate outer ball in the same way as above. This is the valve without the silver tube.

The Spheroidz is now ready to go!



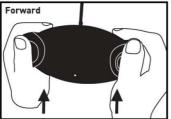
### **Driving your Spheroidz**

Turn on the handset ON/OFF button to the ON position.

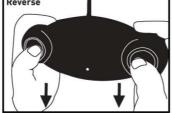
Note to reserve battery power the vehicle will go into sleep mode if it is not moved for 10 minutes. To re-activate simply shake the ball.

The vehicle has proportional 3 speed controls going both forward and reverse directions. This means it can be driven steadily slowly as well as fast.

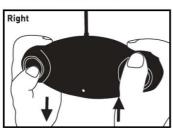
The vehicle can move forward, backwards, left and right as well as spin on the spot.



Press both Control Sticks forward.

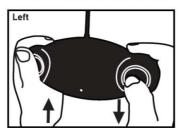


Press both Control Sticks backward.



Press left Control Stick forward and do not move the right Control Stick.

For a sharp turn press left Control Stick forward and press right Control Stick backwards, but for a short time only. Pressing both in this way will make the vehicle spin on the spot.



Press right Control Stick forward and do not move the left Control Stick.

For a sharp turn press right Control Stick forward and left Control Stick backwards, but only for a short time. Pressing both in this way will make the vehicle spin on the spot.

# Information



#### Spheroidz XL

#### What does it do?

Spherzoidz XL is a skid-steered, radio-controlled vehicle. Radio signals sent from the controller tell each wheel when and in what direction to turn. The force of the wheels on the interior of the air-filled sphere impart an equal and opposite reaction to the sphere, setting the entire sphere and vehicle in motion.

#### How does it work?

The key feature of the Spherzoidz XL is the double sphere. The air-filled sphere provides both buoyancy and shock absorption. Buoyancy is the upward force that balances the force of gravity on any object in a fluid. Simply put, when an object is placed on, or even in, a fluid such as water, it must push some of that fluid out of its way. If the weight of the fluid pushed away (displaced) is more than the weight of the object, the object will float. That is why even very heavy ships made of steel can float: they displace their weight in water.

But the air-filled sphere also works to absorb shocks on land. Many different materials can be used to absorb shock. Solid rubber, metal springs, or even leather can absorb shock. Yet an air-filled sphere, like an air-filled tyre doesn't rob the vehicle of energy the way these other materials do.

#### Try it out

The Spherzoidz XL works by friction between the outer shell and the surface it is travelling across. How can you make it travel faster when there is not so much friction? For example, what if the vehicle tries to traverse a giant vat of jam? Alright, maybe water is more likely. Before propellers, many ships used paddle wheels. Experiment with sticky tape and card to see if you can't come up with a more effective way to move through the water. Of course, the beauty of the Spherzoidz XL is that it is effective on land or sea just as it is!

#### Did you know?

For generations vehicles used all manner of shock-absorbing designs to keep passengers comfortable and to keep tyres in contact with the road. Without that contact it can be very hard to make a vehicle go, turn – or stop! Air-filled tyres were first invented in 1847 by Robert Thomson. But nobody at the time saw much need for them. It was only once the bicycle became popular about four decades later that air-filled tyres came into use. It was in 1888 that John Dunlop "invented" the air-filled tyre all over again. The new style of tyre proved comfortable, but more importantly let racers go faster than their competitors on solid rubber tyres.

#### National Curriculum coverage

The Spheroidz XL is a great toy for exploring "Forces and Motion" a key part of the KS 1 & 2 National Curriculum for Science.

#### In the Science Museum

Visit the museum's Making of the Modern World gallery to see all manner of weird and wild vehicles, from Italian and German three-wheeled bubble cars to Stephenson's revolutionary Rocket locomotive.

#### About the Science Museum

Internationally recognised as one of the world's leading science centres, the Science Museum, London, contains more than 10,000 amazing exhibits, two fantastic simulator rides and the astounding IMAX cinema. Enter a world of discovery and achievement, where you can see, touch and experience real objects and icons which have shaped the world we live in today. Phone +44 (0) 870 870 4868 for details or visit our website: www.sciencemuseum.org.uk

Science Museum, Exhibition Road, London SW7 2DD Entry to the Science Museum is FREE!

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Not suitable for children under 3 years old due to small parts which may represent a choking hazard. Recommended for use by children over 5 years old. Do not operate during thunderstorms or rain Do not submerge in water. Keep fingers, hair and loose clothing away from the tyres, gears and motor. Please retain this information for future reference. Adult supervision required. Operates on 27 MHz frequency. Made in China.

#### **Battery Information**

- Non-rechargeable batteries are not to be recharged;
- Rechargeable batteries are only to be charged under adult supervision;
- Rechargeable batteries are to be removed from the toy before being charged;
- Different types of batteries or new and used batteries are not to be mixed;
- Batteries are to be inserted with the correct polarity;
- Exhausted batteries are to be removed from the toy;
- The supply terminals are not to be short-circuited.

#### Always:

- Make sure battery compartments are secure.
- · Use batteries of the correct size and type.
- Fit batteries correctly observing the plus and minus marks on the battery and compartment.
- Replace a whole set of batteries at one time.
- · Remove dead batteries from equipment.
- Remove batteries from appliance that will not be used again for a long time.
- Please remember that AA batteries should be kept away from young children as they could be easily swallowed.
  Seek medical advice if you believe a cell has been swallowed.
- Please ensure that batteries are installed by an adult prior to use.

#### Never

· Never dispose of batteries in a fire.

Consumers have a significant role to play in reducing the impact of waste electrical and electronic equipment on the environment, you can help by re-using or recycling such equipment.



The crossed out wheelie-bin symbol indicates that the product & batteries must not be disposed of in domestic waste as they contain substances which can be damaging to the environment and human health. If you cannot re-use or recycle the product or batteries, please use designated collection points, or civic recycling facilities to dispose of them.

#### Note:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- -- Reorient or relocate the receiving antenna.
- -- Increase the separation between the equipment and receiver.
- -- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- -- Consult the dealer or an experienced radio/TV technician for help.

The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment such modifications could void the user authority to operate the equipment.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation. Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.